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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,229	09/18/2003	Qiang Cao	50-6	8479

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Lucent Technologies Inc.
Docket Administrator (Room 3J-219)
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EXAMINER

HOLLIDAY, JAIME MICHELE

ART UNIT

PAPER NUMBER

2686

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/666,229	CAO ET AL.	
	Examiner	Art Unit	
	Jaime M. Holliday	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ; ; | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on September 18, 2003 has been considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-3, 6, 8 and 9** are rejected under 35 U.S.C. 102(e) as being anticipated by **Amirijoo et al. (Pub # U.S. 2003/0050097 A1)**.

Consider **claim 1**, Amirijoo et al. clearly show and disclose an enhanced radio network controller (RNC) node of a radio access network stores context

information for a user equipment unit, and initiates a cell update-prompting message. The stored context information is used by the context-enhanced RNC node for addressing the cell update-prompting message to the user equipment unit. The cell update-prompting message can be transmitted collectively to plural user equipment units. The cell update-prompting message can be addressed using a group address associated with the plural user equipment units. Such group address can be formed, for example, using the serving radio network controller (SRNC) identity of the failed SRNC and selected bits of a serving radio network temporary identity (S-RNTI) information element, reading on the claimed "method of addressing a message to a subset of the mobile user terminals in radio connection with a radio network controller of a telecommunications network comprising including in the message a first digital identifier and a second digital identifier," (paragraphs 26 and 32),

the information element known as the universal radio network temporary identity (U-RNTI) consists of a first information element known as the SRNC Identity (SNRC-id), reading on the claimed "the first digital identifier the radio network controller in connection with the mobile terminals of the subset, the first identifier being known to the mobile user terminals," (paragraph 91), and

a second information element known as the S-RNTI (20 bits) which is a number allocated by that SNRC for distinguishing the user equipment, reading on the claimed "the second digital identifier being selected bits of the identities of the

mobile user terminals in the subset, each mobile user terminal knowing its respective identity,” (paragraph 91),

an addressing technique is particularly beneficial for grouping and addressing the user equipment units which have common values in the first M number of bits of their S-RNTI, reading on the claimed “all of the identities of the mobile user terminals in the subset having the same said selected bits common,” (paragraph 94).

Consider **claim 2**, and **as applied to claim 1 above**, Amirijoo et al. further disclose an addressing technique using the N most significant bits of the U-RNTI where $N \geq 12$ and a variation of this technique where $N > 16$, reading on the claimed “number of selected bits in the second identifier is adjusted dependent on which subset of the mobile user terminals in selected,” (paragraphs 94 and 99).

Consider **claim 3**, and **as applied to claim 1 above**, Amirijoo et al. further disclose user equipment units being addressed with a group identity or SRNC-id + some bits of the SRNTI, reading on the claimed “first identifier is the SRNC identity field and the second identifier is the bits of a respective subscriber-radio network temporary identity (S-RNTI) that are common to the subset of mobile user terminals,” (paragraph 92).

Consider **claim 6**, and **as applied to claim 3 above**, Amirijoo et al. further disclose an addressing technique using the N most significant bits of the U-RNTI,

reading on the claimed "selected bits are the most significant bits if the identities of the mobile user terminals in the subset," (fig. 7 and paragraph 94).

Consider **claim 8**, and **as applied to claim 1above**, Amirijoo et al. further disclose an addressing technique using the N most significant bits of the U-RNTI, reading on the claimed "selected bits are the most significant bits if the identities of the mobile user terminals in the subset," (fig. 7 and paragraph 94).

Consider **claim 9**, Amirijoo et al. clearly show and disclose after reset of the SRNC, the drift RNC (DRNC) initiates transmission of the cell update-prompting message to the user equipment unit, and if cell update is not possible (e.g., it is not possible to recover after RNC failure), the user equipment unit (UE) transitions to Idle mode by releasing the RRC connection, reading on the claimed "method of sending a radio connection release message to a selected subset of the mobile user terminals in radio connection via a radio network with a radio network controller in consequence of the radio network controller being at least partially reset," (paragraphs 76 and 103), comprising the method of

an enhanced radio network controller (RNC) node of a radio access network stores context information for a user equipment unit, and initiates a cell update-prompting message. The stored context information is used by the context-enhanced RNC node for addressing the cell update-prompting message to the user equipment unit. The cell update-prompting message can be transmitted collectively to plural user equipment units. The cell update-prompting message can be addressed using a group address associated with the plural

user equipment units. Such group address can be formed, for example, using the serving radio network controller (SRNC) identity of the failed SRNC and selected bits of a serving radio network temporary identity (S-RNTI) information element, reading on the claimed "method of addressing a message to a subset of the mobile user terminals in radio connection with a radio network controller of a telecommunications network comprising including in the message a first digital identifier and a second digital identifier," (paragraphs 26 and 32),

the information element known as the universal radio network temporary identity (U-RNTI) consists of a first information element known as the SRNC Identity (SNRC-id), reading on the claimed "the first digital identifier the radio network controller in connection with the mobile terminals of the subset, the first identifier being known to the mobile user terminals," (paragraph 91), and

a second information element known as the S-RNTI (20 bits) which is a number allocated by that SNRC for distinguishing the user equipment, reading on the claimed "the second digital identifier being selected bits of the identities of the mobile user terminals in the subset, each mobile user terminal knowing its respective identity," (paragraph 91),

an addressing technique is particularly beneficial for grouping and addressing the user equipment units which have common values in the first M number of bits of their S-RNTI, reading on the claimed "all of the identities of the mobile user terminals in the subset having the same said selected bits common," (paragraph 94).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 4, 5 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Amirijoo et al. (Pub # U.S. 2003/0050097 A1)** in view of **Wallentin et al. (Pub # U.S. 2003/0003895 A1)**.

Consider **claim 4**, and **as applied to claim 3 above**, Amirijoo et al. clearly show and disclose the claimed invention except that the cell-updating message includes an indication as to where the bits are in the S-RNTI.

In the same field of endeavor, Wallentin et al. clearly show and disclose a release authentication mode of operation, an authentication mechanism protects against an unauthorized connection release message directed to a mobile node of the network (paragraph 44). When the RNC needs to release one or several user equipments (UE) on the control or paging channels (e.g. after an RNC reset when UE contexts were lost), the RNC includes an authentication release key in a release message. When the user equipment unit receives the release message, a key validator of the user equipment unit uses the authentication release key and the U-RNTI as input to indicia generator that is a one-way function F that gives an UE individual authentication release code as an output, (paragraph 108). A paging message for use on the paging channel when releasing a group of UEs, includes U-RNTI group. The "U-RNTI group" is an information element which comprises a group discriminator field or subelement which indicates either that the message is directed to "all UEs" or that the recipients of the message are to be determined by using the "U-RNTI mask" field or subelement. If the group discriminator field message is set to "U-RNTI mask",

a U-RNTI value and a U-RNTI bit mask index are also included. The latter indicates which bits in the U-RNTI that are to be matched with the UE's U-RNTI. Thus, the U-RNTI group is used to identify a group of UEs having an RRC connection, reading on the claimed "message includes an indication of where said selected bits are in the identities of the mobile user terminals," (paragraphs 140 and 141).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to mask part of the U-RNTI as taught by Wallentin et al. in the method of Amirijoo et al. to address a message to plural user equipments.

Consider **claim 5**, Amirijoo et al., as modified by Wallentin et al., clearly show and disclose the claimed invention **as applied to claim 4 above**, and Amirijoo et al. further disclose an addressing technique using the N most significant bits of the U-RNTI, reading on the claimed "selected bits are the most significant bits if the identities of the mobile user terminals in the subset," (fig. 7 and paragraph 94).

Consider **claim 7**, and **as applied to claim 1 above**, Amirijoo et al. clearly show and disclose the claimed invention except that the cell-updating message includes an indication as to where the bits are in the S-RNTI.

In the same field of endeavor, Wallentin et al. clearly show and disclose a release authentication mode of operation, an authentication mechanism protects against an unauthorized connection release message directed to a mobile node of the network (paragraph 44). When the RNC needs to release one or several

user equipments (UE) on the control or paging channels (e.g. after an RNC reset when UE contexts were lost), the RNC includes an authentication release key in a release message. When the user equipment unit receives the release message, a key validator of the user equipment unit uses the authentication release key and the U-RNTI as input to indicia generator which is a one-way function F which gives an UE individual authentication release code as an output, (paragraph 108). A paging message for use on the paging channel when releasing a group of UEs, includes U-RNTI group. The "U-RNTI group" is an information element which comprises a group discriminator field or subelement which indicates either that the message is directed to "all UEs" or that the recipients of the message are to be determined by using the "U-RNTI mask" field or subelement. If the group discriminator field message is set to "U-RNTI mask", a U-RNTI value and a U-RNTI bit mask index are also included. The latter indicates which bits in the U-RNTI that are to be matched with the UE's U-RNTI. Thus, the U-RNTI group is used to identify a group of UEs having an RRC connection, reading on the claimed "message includes an indication of where said selected bits are in the identities of the mobile user terminals," (paragraphs 140 and 141).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to mask part of the U-RNTI as taught by Wallentin et al. in the method of Amirijoo et al. to address a message to plural user equipments.

9. **Claims 10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Amirijoo et al. (Pub # U.S. 2003/0050097 A1)** in view of **Wallentin (Pub # U.S. 2002/0168984 A1)**.

Consider **claim 10**, Amirijoo et al. clearly show and disclose an enhanced radio network controller (RNC) node of a radio access network stores context information for a user equipment unit, and initiates a cell update-prompting message. The stored context information is used by the context-enhanced RNC node for addressing the cell update-prompting message to the user equipment unit. The cell update-prompting message can be transmitted collectively to plural user equipment units. The cell update-prompting message can be addressed using a group address associated with the plural user equipment units. Such group address can be formed, for example, using the serving radio network controller (SRNC) identity of the failed SRNC and selected bits of a serving radio network temporary identity (S-RNTI) information element, reading on the claimed "method of addressing a message to a subset of the mobile user terminals in radio connection with a radio network controller of a telecommunications network comprising including in the message a first digital identifier and a second digital identifier," (paragraphs 26 and 32),

the information element known as the universal radio network temporary identity (U-RNTI) consists of a first information element known as the SRNC Identity (SNRC-id), reading on the claimed "the first digital identifier the radio

network controller in connection with the mobile terminals of the subset, the first identifier being known to the mobile user terminals,” (paragraph 91), and

a second information element known as the S-RNTI (20 bits) which is a number allocated by that SNRC for distinguishing the user equipment, reading on the claimed “the second digital identifier being selected bits of the identities of the mobile user terminals in the subset, each mobile user terminal knowing its respective identity,” (paragraph 91),

an addressing technique is particularly beneficial for grouping and addressing the user equipment units which have common values in the first M number of bits of their S-RNTI, reading on the claimed “all of the identities of the mobile user terminals in the subset having the same said selected bits common,” (paragraph 94).

However, Amirijoo et al. does not disclose that user equipment receiving the message matches the SRNC identifier and the S-RNTI, and act in response to the message.

In the same field of endeavor, Wallentin clearly shows and discloses a radio access network, and a control node thereof, which releases plural radio connections using an omnibus release message (paragraph 17). User equipment unit (UE) includes a connection release message handling function 200 which is capable, e.g., of decoding the generic connection release message and of determining whether a connection release message is an omnibus release message. To this end, connection release message handling function has access

to a memory 202 which has stored therein, e.g., the predetermined value or reserved range which specifies that a connection release message is a omnibus release message. In other words, the values stored in memory are those utilized by omnibus release message generator **100** to prepare the S-RNTI information element of the omnibus release message and are used by connection release message handling function to ascertain if an incoming connection release message is applicable to all user equipment units. Of course, the memory can also store the U-RNTI currently accorded to the individual UE in which the memory is situated. When the connection release message handling function determines that a received connection release message is uniquely addressed to this user equipment unit (UE), or that an omnibus release message has been received, the user equipment unit (UE) enters an idle mode, reading on the claimed "mobile user terminals in the subset receiving the message and as the first and second identifiers match corresponding information known by those mobile user terminals, those mobile terminals act in response to the message," (paragraph 54).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to determine if a message is addressed as taught by Wallentin et al. in the method of Amirijoo et al. to successfully address a message to plural user equipments.

Consider **claim 11**, Amirijoo et al., as modified by Wallentin, clearly show and disclose the claimed invention **as applied to claim 10 above**, and Amirijoo

et al. further disclose an addressing technique using the N most significant bits of the U-RNTI where $N \geq 12$ and a variation of this technique where $N > 16$, reading on the claimed "number of selected bits in the second identifier is adjusted dependent on which subset of the mobile user terminals is selected," (paragraphs 94 and 99).

Consider **claim 12**, Amirijoo et al., as modified by Wallentin, clearly show and disclose the claimed invention **as applied to claim 10 above**, and Amirijoo et al. further disclose user equipment units being addressed with a group identity or SRNC-id + some bits of the SRNTI, reading on the claimed "first identifier is the SRNC identity field and the second identifier is the bits of a respective subscriber-radio network temporary identity (S-RNTI) that are common to the subset of mobile user terminals," (paragraph 92).

10. **Claims 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Amirijoo et al. (Pub # U.S. 2003/0050097 A1)** in view of **Wallentin (Pub # U.S. 2002/0168984 A1)**, and in further view of **Wallentin et al. (Pub # U.S. 2003/0003895 A1)**.

Consider **claim 13**, and **as applied to claim 12 above**, Amirijoo et al., as modified by Wallentin, clearly show and disclose the claimed invention except that the cell-updating message includes an indication as to where the bits are in the S-RNTI.

In the same field of endeavor, Wallentin et al. clearly show and disclose a release authentication mode of operation, an authentication mechanism protects against an unauthorized connection release message directed to a mobile node of the network (paragraph 44). When the RNC needs to release one or several user equipments (UE) on the control or paging channels (e.g. after an RNC reset when UE contexts were lost), the RNC includes an authentication release key in a release message. When the user equipment unit receives the release message, a key validator of the user equipment unit uses the authentication release key and the U-RNTI as input to indicia generator which is a one-way function F which gives an UE individual authentication release code as an output, (paragraph 108). A paging message for use on the paging channel when releasing a group of UEs, includes U-RNTI group. The "U-RNTI group" is an information element which comprises a group discriminator field or subelement which indicates either that the message is directed to "all UEs" or that the recipients of the message are to be determined by using the "U-RNTI mask" field or subelement. If the group discriminator field message is set to "U-RNTI mask", a U-RNTI value and a U-RNTI bit mask index are also included. The latter indicates which bits in the U-RNTI that are to be matched with the UE's U-RNTI. Thus, the U-RNTI group is used to identify a group of UEs having an RRC connection, reading on the claimed "message includes an indication of where said selected bits are in the identities of the mobile user terminals," (paragraphs 140 and 141).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to mask part of the U-RNTI as taught by Wallentin et al., in the combination of Amirijoo et al. and Wallentin, to address a message to plural user equipments.

Consider **claim 14**, and **as applied to claim 10 above**, Amirijoo et al., as modified by Wallentin, clearly show and disclose the claimed invention except that the cell-updating message includes an indication as to where the bits are in the S-RNTI.

In the same field of endeavor, Wallentin et al. clearly show and disclose a release authentication mode of operation, an authentication mechanism protects against an unauthorized connection release message directed to a mobile node of the network (paragraph 44). When the RNC needs to release one or several user equipments (UE) on the control or paging channels (e.g. after an RNC reset when UE contexts were lost), the RNC includes an authentication release key in a release message. When the user equipment unit receives the release message, a key validator of the user equipment unit uses the authentication release key and the U-RNTI as input to indicia generator that is a one-way function F that gives an UE individual authentication release code as an output, (paragraph 108). A paging message for use on the paging channel when releasing a group of UEs, includes U-RNTI group. The "U-RNTI group" is an information element which comprises a group discriminator field or subelement which indicates either that the message is directed to "all UEs" or that the

recipients of the message are to be determined by using the "U-RNTI mask" field or subelement. If the group discriminator field message is set to "U-RNTI mask", a U-RNTI value and a U-RNTI bit mask index are also included. The latter indicates which bits in the U-RNTI that are to be matched with the UE's U-RNTI. Thus, the U-RNTI group is used to identify a group of UEs having an RRC connection, reading on the claimed "message includes an indication of where said selected bits are in the identities of the mobile user terminals," (paragraphs 140 and 141).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to mask part of the U-RNTI as taught by Wallentin et al., in the combination of Amirijoo et al. and Wallentin, to address a message to plural user equipments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime M. Holliday whose telephone number is (571) 272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

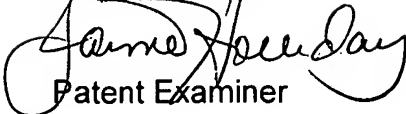
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jaime Holliday



Patent Examiner

Marsha D Banks-Harold

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